ABSTRACT

A non-volatile data storage interface unit and method for receiving/transmitting data via the interface unit are disclosed. The non-volatile data storage interface unit is generally incorporated into an information distribution system that is arranged to distribute information assets stored upon a non-volatile data storage such as movies or songs digitally stored upon a hard drive. The distribution system is also generally arranged to transmit the information assets on demand to users via a dynamic data transmission path. Therefore, once selected, the path (i.e., connection) transmits the information asset as a set of cells over a cell-based switching fabric.

The non-volatile data storage interface unit includes a cell transceiver that is connectable to the cell-based switching fabric. The cell transceiver includes a raw data to cell data formatting circuit that converts retrieved raw data into cell format suitable for transmission over the cell-based switching fabric. The cell transceiver also includes a cell data to raw data formatting circuit. The non-volatile data storage interface also includes a non-volatile data storage controller interposed between the cell transceiver and the non-volatile data storage. The non-volatile data storage controller and cell transceiver together perform functions previously rendered by a centralized programmed processor. A data buffer smoothes data transmissions to/from a non-volatile memory drive.

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